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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,622	01/20/2004	John T. Beck	15437-0592	3546
45657 7590 04/07/2008 HICKMAN PALERMO TRUONG & BECKER, LLP AND SUN MICROSYSTEMS, INC. 2055 GATEWAY PLACE SUITE 550 SAN JOSE, CA 95110-1089				
EXAMINER				
VERDI, KIMBLEANN C				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/761,622

**Applicant(s)**

BECK ET AL.

**Examiner**

KimbleAnn Verdi

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 28, 29, 32-41, 44-52 and 55-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28, 29, 32-41, 44-52, and 55-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 13, 2007, January 20, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date December 22, 2007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 28-29, 32-41, 44-52, and 55-60 are pending in the current application.

#### ***Specification***

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claims 40-51 refer to a machine-readable storage medium, however the specification does not disclose a machine-readable storage medium.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 40-51 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 40-51 recite a "machine readable storage medium" and the specification fails to provide antecedent bases for this limitation [see objection to the specification above]. Without antecedent basis for "machine readable storage medium", it is unclear if the limitation intended to be the same as the storage media described as part of the disclosed program product or whether it's intended to be broader than the disclosed storage media. It is believed that the limitation "machine readable storage medium" is intended to claim something broader than the disclosed storage media and cover signals, waves and other forms of transmission media, that carry instructions. In

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addition, in accordance with Applicant's specification Applicant discloses a machine readable medium which may be acoustic or light waves, such as those generated during radio-wave and infra-red data communications or carrier wave (as disclosed on paragraphs [0092]-[0093] of Applicant's specification). Therefore, the limitation "machine readable storage medium" is not limited to physical articles or objects which constitute a manufacture within the meaning of 35 USC 101 and enable any functionality of the instructions carried thereby to act as a computer component and realize their functionality. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 28-29, 32-41, 44-51, and 55-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 28, 40, and 52 the recitation of "wherein the first and second non-global zones are established by the OS kernel" is not disclosed in the specification. Thorough

review of the specification by the Examiner did not result in finding of the subject matter properly disclosed in the specification.

Claims 29, 32-39, 41, 44-51 and 55-60 are rejected since they are dependent on independent claims 28, 40, and 52.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 28-29, 32-41, 44-51, and 55-60 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "established" in claims 1-2, 4, 8-9, 11, and 15 is a relative term which renders the claim indefinite. The term "established" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The first and second non-global zones are rendered indefinite by the use of the term "established". For purposes of examination the first and second non-global zones established by the OS kernel is interpreted as the first and second non-global zones file installation is assisted by the OS kernel.

Claims 29, 32-39, 41, 44-51 and 55-60 are rejected since they are dependent on independent claims 28, 40, and 52.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 28-29, 32-41, 44-52, and 55-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over 2002/0174215 A1 to Schaefer in view of WO 00/45262 to Susser et al. (hereinafter Susser), and further in view of 2003/0014466 A1 to Berger et al. (hereinafter Berger).

11. As to claim 28, Schaefer teaches the invention substantially as claimed including a machine-implemented method, comprising:

establishing, within a global operating system environment provided by an operating system (OS) kernel (Operating System 10, Fig. 1, paragraph [0013]), a first non-global zone which serves as a first virtual platform for supporting and isolating user processes (application 52, Fig. 2) (paragraphs [0018]-[0019]),

establishing, within the global operating system environment, a second non-global zone which serves as a second virtual platform for supporting and isolating user processes (application 54, Fig. 2) (paragraphs [0018]-[0019]); and

isolating the first set of one or more user processes (application 52, Fig. 2) within the first non-global zone and the second set of one or more user processes within the second non-global zone (application 54, Fig. 2) (paragraph [0012]).

Schaefer does not explicitly disclose wherein the first non-global zone is a separate and distinct OS partition of the global operating system environment having a first zone identifier associated therewith, and wherein the first non-global zone is established and exists without requiring any user processes to be running therein;

wherein the second non global zone is a separate and distinct OS partition of the global operating system environment having a second zone identifier associated therewith, and wherein the second non-global zone is established and exists without requiring any user processes to be running therein;

executing a first set of one or more user processes within the first non global zone, wherein each user process in the first set of user processes has the first zone identifier associated therewith;

executing a second set of one or more user processes within the second non-global zone, wherein each user process in the second set of user processes has the second zone identifier associated therewith;

the first set of one or more user processes cannot access processes in the second non-global zone and the second set of one or more user processes cannot access processes in the first non-global zone; and

wherein the first and second non-global zones are established by the OS kernel, and wherein the OS kernel enforces zone boundaries to isolate the first set of one or more user processes within the first non-global zone and the second set of one or more user processes within the second non-global zone.

However Susser teaches wherein the first non-global zone having a first zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the first non-global zone is established and exists without requiring any user processes to be running therein (Context 1, 770, Fig. 7, page 11, lines 29-31);

wherein the second non global zone having a second zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the second non-global zone is established and exists without requiring any user processes to be running therein (Context 2, 780, Fig. 7, page 11, lines 29-31);

executing a first set of one or more user processes within the first non global zone (Object 440, Fig. 9), wherein each user process in the first set of user processes has the first zone identifier associated therewith (page 11, lines 25-27);

executing a second set of one or more user processes within the second non-global zone (Object 640, 910, Fig. 9), wherein each user process in the second set of user processes has the second zone identifier associated therewith (page 11, lines 25-27); and

the first set of one or more user processes (Object 640, Fig. 6) cannot access processes in the second non-global zone (Object 636, Fig. 6) and the second set of one or more user processes cannot access processes in the first non-global zone (page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7).



It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the OSGuard of Schaefer with the teachings of a Firewall from Susser because this feature would have provided a mechanism in which each context is separated from the other by a context barrier between the execution contexts (page 11, lines 13-15 of Susser).

In addition Berger teaches wherein the first non-global zone is a separate and distinct OS partition of the global operating system environment (paragraphs [0035]-[0036] and [0045]-[0046]);

wherein the second non global zone is a separate and distinct OS partition of the global operating system environment (paragraphs [0035]-[0036] and [0045]-[0046]); and

wherein the first and second non-global zones are established by the OS kernel (paragraph [0039]), and wherein the OS kernel enforces zone boundaries to isolate the first set of one or more user processes within the first non-global zone and the second set of one or more user processes within the second non-global zone (paragraph [0041]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the OS Guard of Schaefer as modified by Susser with the teachings of Compartment from Berger because this feature would have further provided a mechanism for groups of processes or threads which are limited to accessing certain subsets of system resources of a computer system, are semi-

isolated portions of a system, and a mechanism for mandatory protection of processes, files and network resources (paragraph [0035] of Berger).

12. As to claim 29, Schaefer teaches the method of claim 28, wherein the kernel instance provides services (paragraph [0004]) that are invoked by the first set of user processes (paragraph [0012]), and wherein the services are invoked by the first set of user processes through the first virtual platform (paragraphs [0012] and [0019]).

13. As to claim 32, Schaefer teaches the method of claim 28, wherein a first set of resources are associated with the first non-global zone and a second set of resources are associated with the second non-global zone (paragraphs [0019] and [0022]);

wherein the first set of resources are accessed by the first set of user processes through the first virtual platform and the second set of resources are accessed by the second set of user processes through the second virtual platform (paragraphs [0014], [0019] and [0022]); and

wherein the first set of resources and the second set of resources each include one or more resources from the group consisting of a network interface, a communications interface, a file system, a system console, a DASD address, and an operating system service process (paragraph [0022]).

14. As to claim 33, Schaefer as modified teaches the method of claim 32, wherein isolating the first set of user processes within the first non-global zone and the second set of user processes within the second non- global zone further comprises:

preventing the first set of user processes (Object 640, Fig. 6 of Susser) from accessing the second set of resources associated with the second non global zone (Object 636, Fig. 6, page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser); and

preventing the second set of user processes from accessing the first set of resources associated with the first non-global zone (page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser).

15. As to claim 34, Schaefer teaches the method of claim 32, wherein executing the first set of user processes within the first non-global zone causes a first application environment to be established within the first non-global zone (application 52, Fig. 2, paragraph [0019] and [0023]), and wherein the method further comprises:

receiving a command to halt the first non-global zone (paragraph [0024]);  
in response to the command to halt the first non-global zone (paragraph [0019]):  
terminating all user processes executing within the first non-global zone (unloading virtual environment, paragraph [0024]), thereby terminating the first application environment (paragraph [0023]); and  
disassociating the first set of resources from the first non-global zone (paragraph [0024]);

wherein the second non-global zone is not affected by the command to halt the first non-global zone (paragraph [0019]).

16. As to claim 35, Schaefer teaches the method of claim 32, wherein executing the first set of user processes within the first non-global zone causes a first application environment to be established within the first non-global zone (application 52, Fig. 2, paragraph [0019] and [0023]), and wherein the method further comprises:

receiving a command to halt the first non-global zone (paragraph [0024]);

in response to the command to halt the first non-global zone (paragraph [0019]):

terminating all user processes executing within the first non-global zone (unloading virtual environment, paragraph [0024]), thereby terminating the first application environment (paragraph [0023]); and

performing one or more tasks from the group consisting of stopping a scheduler process, unmounting one or more file systems, closing one or more network interfaces, and removing configurations for devices associated with the first non-global zone (e.g. unloading virtual environment, paragraphs [0022] and [0024]);

wherein the second non-global zone is not affected by the command to halt the first non-global zone (paragraph [0019]).

17. As to claim 36, Schaefer teaches the method of claim 28, further comprising:

allowing a first administrator to manage processes and resources within the first non-global zone (paragraph [0062]), wherein the first administrator is not allowed to

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manage processes and resources within the second non-global zone (paragraphs [0033] and [0062]); and

allowing a second administrator to manage processes and resources within the second non-global zone (paragraph [0062]), wherein the second administrator is not allowed to manage processes and resources within the first non-global zone (paragraphs [0033] and [0062]).

18. As to claim 37, Schaefer as modified teaches the method of claim 28, wherein establishing the first non-global zone comprises:

accessing configuration information associated with the first non-global zone (paragraphs [0024] and [0062] of Schaefer);

installing files and directories necessary for the first non-global zone to function (paragraph [0024] of Schaefer); and

readying the first non-global zone by performing one or more tasks from the group consisting of assigning the first zone identifier (e.g. Unique Name, page 11, line 25 of Susser), starting a scheduler process, establishing one or more network interfaces, mounting one or more file systems, initializing a system console, and configuring one or more devices (e.g. loading, paragraphs [0022] and [0024] of Schaefer);

wherein readying the first non-global zone does not include executing user processes within the first non global zone (page 11, lines 29-31 of Susser).

19. As to claim 38, Schaefer as modified teaches the method of claim 37, wherein the configuration information comprises one or more parameters from the group consisting of a zone name (e.g. Unique Name, page 11, line 25 of Susser), a path to a root directory for the first non-global zone, specification of one or more file systems to be mounted when the first non-global zone is readied, specification of one or more network interfaces, specification of one or more devices to be configured when the first non global zone is readied, and specification of resource controls to be imposed on the first non-global zone (paragraph [0026] and [0040] of Schaefer).

20. As to claim 39, Schaefer teaches the method of claim 28, wherein executing the first set of user processes within the first non-global zone comprises:

executing an initialization process (Process Manager 120, Fig. 4, paragraph [0020]); and

initializing, by the initialization process, execution of the first set of user processes (paragraphs [0022]-[0023]).

21. As to claims 40-41, these claims are rejected for the same reasons as claims 28-39 respectively, since claims 40-41 recite the same or equivalent invention, see the rejections to claims 28-29 above.

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22. As to claims 44-51, these claims are rejected for the same reasons as claims 32-39 respectively, since claims 44-51 recite the same or equivalent invention, see the rejections to claims 32-39 above.

23. As to claim 52, this claim is rejected for the same reasons as claim 1 since claim 52 recites the same or equivalent invention, see the rejection to claim 1 above.

24. As to claim 55-58, this claim is rejected for the same reasons as claim 32-35 since claim 55-58 recites the same or equivalent invention, see the rejection to claim 32-35 above.

25. As to claims 59-60, these claims are rejected for the same reasons as claims 37-38 respectively, since claims 59-60 recite the same or equivalent invention, see the rejections to claims 37-38 above.

### ***Response to Arguments***

26. Applicant's arguments with respect to the 35 U.S.C. 101 rejection of claims 40-41 and 44-51 have been fully considered but they are not persuasive.

**(1) Applicants would like to point out that, as they stand, claims 40-41 and 44-51 do not recite a "machine-readable medium" but rather a "machine-**

**readable storage medium". It is well known that waves are transitory, and hence are incapable of storing anything (e.g. instructions, as recited in claims 40-41 and 44-51). Therefore, waves do not qualify as storage media. Since claims 40-41 and 44-51 specifically recite a "machine-readable storage medium", these claims do not encompass waves (page 18, lines 4-10).**

In response to argument (1), Applicant's arguments have been considered but Applicant's does not disclose a machine readable storage medium, only a machine readable medium is disclosed (paragraphs [0092]-[0093] Applicant's specification). See the 35 U.S.C. 101 rejection above.

27. Applicant's arguments with respect to claims 28-29, 32-41, and 44-52 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

28. The prior art made of record on the accompanying PTO-892 and not relied upon, is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571)270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 29, 2008  
KV

/VAN H NGUYEN/  
Primary Examiner, Art Unit 2194